

# District 04 Mobility Performance Report

2016 Third Quarter

**DEPARTMENT OF TRANSPORTATION**

October 10, 2016  
District 4-Office of Highway Operations

## District 04 Mobility Performance Report

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2016 Third Quarter

### EXECUTIVE SUMMARY

#### Overview

Caltrans District 4 is comprised of nine counties that border the San Francisco Bay: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma Counties. Although these are urban counties, they do contain a large amount of sparsely populated land.

The Mobility Performance quarterly analysis compares information with over a year ago and over last quarter in the following performance measures:

- Vehicle Miles of Travel (VMT)
- Vehicle Hours of Delay (VHD)
- Lost Lane Miles (equivalent lost productivity)
- Detector Health

This information is based on data collected every day of the quarter, twenty-four hours a day, by automated vehicle detector stations deployed on urban-area freeways where congestion is regularly experienced. The MPR presents congestion information at two speed thresholds: delay from vehicles traveling below 35 miles per hour (mph), and delay from vehicles traveling below 60 mph. The delay at the 35 mph threshold represents severe congestion while delay at 60 mph represents all congestion, both light and heavy. These thresholds are set by Caltrans and are based upon engineering experience and District input.

## FINDINGS

In the third quarter, total delay equaled 10.5 million vehicle hours of delay (VHD) at the 35 mph speed threshold, and 20.2 million VHD at the 60 mph threshold. Compared to the same quarter the year before, there was a 37.8% increase in 35 mph total quarterly delay and 29.1% increase in 60 mph total quarterly delay. This increase may be due to the recovering economy and also a 25% increase in good working detector that were able to capture more congestion.

The average weekday delay experienced in this quarter was approximately 132 thousand VHD at 35 mph, and 262 thousand VHD at 60 mph. Thursday was the most congested day of the week.

Alameda County with 3.7 million vehicle hours of total delay at 35 mph during the third quarter was the most congested county in the District. Santa Clara County with 2.3 million vehicle hours of total delay at 35 mph was third most congested county in the District.

## Quarterly Mobility Statistics

Measure	Graph	Percentage Change									
Vehicle Miles of Travel (VMT)	<p>Miles (Billions)</p> <table><tr><th>Quarter</th><th>VMT (Billions)</th></tr><tr><td>2015 Q3</td><td>7.9</td></tr><tr><td>2016 Q2</td><td>7.9</td></tr><tr><td>2016 Q3</td><td>7.9</td></tr></table>	Quarter	VMT (Billions)	2015 Q3	7.9	2016 Q2	7.9	2016 Q3	7.9	Over one year ago	Over last quarter
		Quarter	VMT (Billions)								
2015 Q3	7.9										
2016 Q2	7.9										
2016 Q3	7.9										
		0.2% ↑	1.1% ↑								
Total Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours (Millions)</p> <table><tr><th>Quarter</th><th>VHD (Millions)</th></tr><tr><td>2015 Q3</td><td>7.6</td></tr><tr><td>2016 Q2</td><td>9.4</td></tr><tr><td>2016 Q3</td><td>10.5</td></tr></table>	Quarter	VHD (Millions)	2015 Q3	7.6	2016 Q2	9.4	2016 Q3	10.5	Over one year ago	Over last quarter
		Quarter	VHD (Millions)								
2015 Q3	7.6										
2016 Q2	9.4										
2016 Q3	10.5										
		37.8% ↑	11.5% ↑								
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours (Thousands)</p> <table><tr><th>Quarter</th><th>VHD (Thousands)</th></tr><tr><td>2015 Q3</td><td>100</td></tr><tr><td>2016 Q2</td><td>122</td></tr><tr><td>2016 Q3</td><td>132</td></tr></table>	Quarter	VHD (Thousands)	2015 Q3	100	2016 Q2	122	2016 Q3	132	Over one year ago	Over last quarter
		Quarter	VHD (Thousands)								
2015 Q3	100										
2016 Q2	122										
2016 Q3	132										
		31.5% ↑	7.7% ↑								
Total Vehicle Hours of Delay (VHD) at 60 mph	<p>Hours (Millions)</p> <table><tr><th>Quarter</th><th>VHD (Millions)</th></tr><tr><td>2015 Q3</td><td>15.7</td></tr><tr><td>2016 Q2</td><td>18.6</td></tr><tr><td>2016 Q3</td><td>20.2</td></tr></table>	Quarter	VHD (Millions)	2015 Q3	15.7	2016 Q2	18.6	2016 Q3	20.2	Over one year ago	Over last quarter
		Quarter	VHD (Millions)								
2015 Q3	15.7										
2016 Q2	18.6										
2016 Q3	20.2										
		29.1% ↑	8.7% ↑								
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph	<p>Hours (Thousands)</p> <table><tr><th>Quarter</th><th>VHD (Thousands)</th></tr><tr><td>2015 Q3</td><td>210</td></tr><tr><td>2016 Q2</td><td>247</td></tr><tr><td>2016 Q3</td><td>262</td></tr></table>	Quarter	VHD (Thousands)	2015 Q3	210	2016 Q2	247	2016 Q3	262	Over one year ago	Over last quarter
		Quarter	VHD (Thousands)								
2015 Q3	210										
2016 Q2	247										
2016 Q3	262										
		24.8% ↑	6.1% ↑								

Measure	Graph	Percentage Change	
Average Vehicle Hours of Delay by Day of Week at 60 mph		Largest Magnitude Decrease over one year ago	Largest Magnitude Decrease over last quarter
		–	–
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		Thursday 25.7%	Saturday 24.3%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Weekdays		Largest Magnitude Weekday Decrease over one year ago	Largest Magnitude Weekday Decrease over last quarter
		–	5 PM -1.1%
		Largest Magnitude Weekday Increase over one year ago	Largest Magnitude Weekday Increase over last quarter
		5 PM 25%	9 AM 21.2%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Saturdays		Largest Magnitude Saturday Decrease over one year ago	Largest Magnitude Saturday Decrease over last quarter
		6 AM -11.1%	–
		Largest Magnitude Saturday Increase over one year ago	Largest Magnitude Saturday Increase over last quarter
		12 PM 81.4%	12 PM 45.4%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Sundays/Holidays		Largest Magnitude Sun./Holiday Decrease over one year ago	Largest Magnitude Sun./Holiday Decrease over last quarter
		–	5 AM -3.6%
		Largest Magnitude Sun./Holiday Increase over one year ago	Largest Magnitude Sun./Holiday Increase over last quarter
		12 PM 113.5%	7 PM 68.5%

Measure	Graph	Percentage Change	
Total Vehicle Hours of Delay (VHD) by County at 35 mph		Largest Magnitude Decrease over one year ago	Largest Magnitude Decrease over last quarter
		–	Marin -2.6%
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		Alameda 39%	Alameda 14%
Average Non-Holiday Weekday Equivalent Lost Lane Mile Hours at 35 mph		Largest Magnitude Decrease over one year ago	Largest Magnitude Decrease over last quarter
		–	–
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		PM Peak 26.5%	AM Peak 13.9%
Average Number of Good and Bad Detectors		Change in Good over one year ago	Change in Good over last quarter
		25%	5%
		Change in Bad over one year ago	Change in Bad over last quarter
		-23%	-2%

Congestion by Route											
Route	County	Vehicle Hours of Delay at 35 mph			Difference 2016 Q3-2015 Q3		Difference 2016 Q3-2016 Q2		Rank		
		2015 Q3	2016 Q2	2016 Q3	Absolute	Percentage	Absolute	Percentage	2015 Q3	2016 Q2	2016 Q3
I880	Alameda	776,019	1,096,852	1,295,916	519,897	67.0%	199,064	18.1%	2	1	1
I80	Alameda	846,234	684,975	805,816	-40,418	-4.8%	120,841	17.6%	1	2	2
US101	Santa Clara	549,941	682,465	718,180	168,238	30.6%	35,715	5.2%	4	3	3
I580	Alameda	349,407	497,734	677,488	328,081	93.9%	179,754	36.1%	5	5	4
US101	San Mateo	593,548	562,682	586,260	-7,288	-1.2%	23,578	4.2%	3	4	5
I280	Santa Clara	256,151	339,187	440,575	184,425	72.0%	101,388	29.9%	10	10	6
SR85	Santa Clara	254,140	479,077	438,941	184,800	72.7%	-40,137	-8.4%	11	6	7
I80	Contra Costa	244,574	309,067	376,082	131,508	53.8%	67,015	21.7%	13	13	8
SR24	Contra Costa	234,421	329,278	358,477	124,056	52.9%	29,199	8.9%	14	11	9
I680	Alameda	284,734	343,737	339,819	55,085	19.3%	-3,918	-1.1%	7	9	10
I80	San Francisco	272,290	296,046	329,427	57,137	21.0%	33,381	11.3%	9	14	11
US101	San Francisco	207,079	314,619	328,684	121,605	58.7%	14,065	4.5%	16	12	12
I680	Contra Costa	336,118	348,675	325,387	-10,731	-3.2%	-23,288	-6.7%	6	8	13
SR4	Contra Costa	276,040	435,211	316,447	40,406	14.6%	-118,765	-27.3%	8	7	14
I80	Solano	246,765	209,781	316,387	69,622	28.2%	106,606	50.8%	12	18	15
US101	Marin	227,531	266,254	262,563	35,032	15.4%	-3,691	-1.4%	15	16	16
SR92	San Mateo	172,913	228,928	233,705	60,793	35.2%	4,777	2.1%	17	17	17
SR37	Solano	6,863	7,235	231,733	224,869	3276.4%	224,498	3102.9%	37	36	18
SR84	Alameda	146,107	282,308	219,309	73,202	50.1%	-62,998	-22.3%	19	15	19
SR238	Alameda	62,743	155,555	173,536	110,794	176.6%	17,981	11.6%	30	19	20
SR17	Santa Clara	86,214	131,713	169,446	83,232	96.5%	37,733	28.6%	25	24	21
SR237	Santa Clara	163,783	153,552	150,159	-13,623	-8.3%	-3,393	-2.2%	18	20	22
I280	San Mateo	88,920	150,907	149,110	60,191	67.7%	-1,797	-1.2%	24	21	23
SR92	Alameda	114,115	135,742	146,105	31,990	28.0%	10,364	7.6%	21	23	24
SR37	Sonoma	109,550	106,420	135,307	25,756	23.5%	28,887	27.1%	22	26	25
I880	Santa Clara	125,075	142,561	126,325	1,250	1.0%	-16,236	-11.4%	20	22	26
I680	Santa Clara	79,802	113,766	119,743	39,941	50.0%	5,977	5.3%	26	25	27
SR12	Solano	0	91,380	115,480	115,480		24,100	26.4%		27	28
SR87	Santa Clara	73,652	89,337	108,875	35,222	47.8%	19,538	21.9%	29	28	29
US101	Sonoma	38,079	74,663	88,340	50,261	132.0%	13,677	18.3%	32	30	30
I580	Contra Costa	75,807	53,498	84,198	8,391	11.1%	30,700	57.4%	27	33	31
SR24	Alameda	97,676	80,813	81,221	-16,455	-16.8%	408	0.5%	23	29	32
I280	San Francisco	56,187	70,815	61,858	5,670	10.1%	-8,957	-12.6%	31	31	33
SR37	Marin	75,254	54,562	50,814	-24,441	-32.5%	-3,748	-6.9%	28	32	34
SR242	Contra Costa	15,271	29,745	39,165	23,893	156.5%	9,420	31.7%	33	34	35
I680	Solano	11,193	18,252	37,654	26,461	236.4%	19,402	106.3%	35	35	36
SR152	Santa Clara	10,186	2,364	7,323	-2,864	-28.1%	4,959	209.8%	36	38	37
SR25	Santa Clara	695	1,582	4,280	3,585	515.7%	2,698	170.6%	42	40	38
SR12	Napa	2,071	3,660	2,368	297	14.3%	-1,292	-35.3%	40	37	39
I80	Napa	6	8	644	639	11405.4%	637	8160.3%	46	45	40
I980	Alameda	852	1,639	418	-434	-51.0%	-1,221	-74.5%	41	39	41
SR156	Santa Clara	115	10	69	-46	-40.1%	59	623.2%	44	44	42
SR29	Napa	24	233	20	-4	-18.1%	-213	-91.6%	45	42	43
I580	Marin	303	1,043	2	-301	-99.4%	-1,041	-99.8%	43	41	44
I380	San Mateo	5,579	0	0	-5,579	-100.0%	0		38		
I780	Solano	2,238	59	0	-2,238	-100.0%	-59	-100.0%	39	43	
I880S	Alameda	12,158	0	0	-12,158	-100.0%	0		34		
SR13	Alameda	0	0	0	0		0				
<b>TOTALS</b>		<b>7,588,423</b>	<b>9,377,986</b>	<b>10,453,651</b>	<b>2,865,229</b>	<b>37.8%</b>	<b>1,075,665</b>	<b>11.5%</b>			